as Georgia Power (and others) in field practice have incorporated rules of thumb in their construction practices (*e.g.* no advanced permitting required for fiber bundles six inches or less in diameter) which permit fiber overlashing to proceed without permit or delay.[129] It is extremely unlikely that an additional fiber overlash will be the "straw that breaks the camels back" for loading purposes. On this issue, and elsewhere, the electric utilities' Comments distort *bona fide* engineering and safety issues beyond recognition for the sole purpose to use the pole resource to secure competitive advantage in the marketplace.

As to utility claims that additional charges are warranted for overlashes to prevent attaching parties from getting a "free ride" for their overlashed attachments,[130] cable operators pay for one foot of space on the pole in the annual rental rate. That foot of space can easily accommodate the strand bolt and clamp (which in most cases is the only piece of attaching party equipment that comes in contact with the pole), the messenger strand itself, and any original and overlashed facilities. The utility incurs no additional costs for overlashes, and should not be permitted to charge an additional toll for such attachments.

As set forth in the attached Supplemental Declaration of Nicholas Theroux, fiber conductors are by far the lightest attachments to the pole. Fiber conductors most commonly used in cable television construction today (96-strand fiber) is .59" in diameter and weighs 150 pounds per 1000 feet. (Even the largest fiber optic trunking cables typically used by cable (216-strand fiber) weigh only 200 pounds per 1000 feet.) Mr. Theroux states that a conservative estimate of the average span length for cable television facilities between utilities poles is 130 feet. Accordingly, the total weight of a 96-strand .59" 130-foot fiber span is approximately 19 pounds, or less than ***one-fifteenth*** of the weight of the 300-pound transformer in EEI's example. Stated another way, 300 pounds of 96-strand .59" fiber (assuming a 130-foot span length) is distributed across between seven and eight poles, while the 300-pound electric transformer is attached to a single pole. Theroux Supp. Decl. ¶¶ 4-6.

[129] A communications engineering software program known as Spanmaster is specifically designed to address pole loading factors. It can be used to measure loading incident to overlashes.

[130] *See, e.g.,* EEI/UTC Comments at 36.

7. The Utilities' Claims To Include A Factor In The Pole Rate For Miscellaneous Additional Charges Should Be Rejected

The utilities' claims that there should be an additional charge factor added to the formula for claimed utility costs associated with pre-inspection,[131] post-inspection,[132] makeready charges, safety inspections, letter writing, contract administration, NESC interpretation, responding to complaints, providing policy updates,[133] mapping tasks, administering a facilities identification system, collection of overdue payments and other matters.

The utilities already ***more than recover*** an appropriate share of these costs through incremental, separately invoiced charges for pre-inspection, post-inspection, makeready and safety inspections. Cable operators are responsible for the costs associated with identifying their facilities on the poles. With respect to such matters as letter writing, contract administration, Code interpretation, collection of overdue payments and other similar administration matters, the utilities already recover their costs associated with such charges through the administrative carrying charges in the current formula. Other matters, such as responding to FCC complaints likewise are covered under the current formula, but should not be the operator's responsibility because it results in the licensee directly indemnifying (and rewarding) the pole owner for the wrongful conduct directed at the licensee.

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[131] Pre-inspection is the term usually applied to utility and/or attaching party review of a pole or other support structure prior to granting an attachment permit and to ascertain the need for any makeready to the pole.

[132] Post-inspection is the term accorded to the engineering review of a pole or other support structure after the third-party attachment is made to ensure that the new facilities have been installed in accordance with applicable safety codes and construction practices.

[133] These "policy updates" are frequently the vehicle for announcing new, unilateral abuses, such as engineering surcharges, pole "audits," and processing guidelines which forbid overlashing of fiber.

IV. THE UTILITIES' EFFORTS TO DEFEAT THE COMMISSION'S CONDUIT RATE FORMULA DO NOT REFLECT ECONOMIC OR OPERATIONAL REALITIES OF CONDUIT PLANT AND SHOULD BE REJECTED

A. There Are No Unique Characteristics of Electric Conduit Justifying Its Exemption From Rate Regulation

Except for the electric industry, support for the Commission's proposal (with some modifications to more accurately reflect current practice) is nearly unanimous among ILECs, CLECs and cable operators.[134] By contrast, the electric utilities display massive resistance to the Commission's efforts to establish reasonable regulation to conduit pricing and access—a responsibility that Congress has specifically assigned to the Commission. Just as the electrics have sought in prior rulemaking to convince this Commission that its jurisdiction attached to pole acts and practices on a pole-by-pole basis in order to hamstring network deployment owned by others, here they seek what would amount to an absurd and endless series of manhole-by-manhole conduit rate cases.[135]

The Commission has proposed a reasonable regulatory model, complete with appropriate use of presumptions analogous to that used for setting reasonable pole rates, to bring the same combination of certainty and flexibility to conduit rates. The electric utilities try to convince the Commission that *any* conduit regulatory structure cannot apply to them. They argue that their conduit records are not accurate or are lacking altogether,[136] and that their conduit assets

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[134] *See, e.g.*, Initial Comments of NCTA, *et al.* at 39-44; MCI Comments at 23; Time Warner Cable Comments at 27-28; TCI Comments at 15; AT&T Comments at 22.

[135] *See, e.g.*, Comments of CP&L, *et al.* at 62-68; Comments of AEP, *et al.* at 91.

[136] *See, e.g.*, CP&L Comments at 65; Comments of AEP, *et al.* at 83.

are fully depreciated.[137] They claim that accessing electric utility conduit poses unique dangers in many cases foreclosing third-party access.[138] They argue that to the extent that access is possible, conduits should be priced on the basis of replacement or reproduction costs.[139]

The utilities' arguments that a portion of their conduits are fully depreciated is of no significance because the conduit asset base, like the pole asset base, are averaged system-wide. In fact, in two separate cases concerning, in part, this precise issue, cable operators challenged the reasonableness of spreading statewide investment across conduit which had been provided free by developers,[140] or been fully depreciated.[141] GTE was settled, and the Commission held in Wichita that statewide averages should apply.[142] Thus, the utilities are fully protected in recovering a fair rental through the process of state-wide averaging.

What the utilities appear to seek is compensation over and above cost, as suggested by CP&L. CP&L claims that it should ignore cost recovery through depreciation when setting rents to third parties, in order to capture the full "economic value."[143] Utilities take a depreciation charge every year on their conduit assets, but now they dismiss depreciation expense as an

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[137] *See, e.g.,* Union Electric ("UE") Comments at 6-7.

[138] Comments of AEP, *et al.* at 89-91.

[139] *Id.* at 91.

[140] *See Chronicle Cablevision of Hawaii v. GTE Hawaiian Tel. Co.*, PA No. 95-001 (complaint filed Oct. 7, 1994).

[141] *Multimedia Cablevision, Inc. v. Southwestern Bell Telephone*, PA No. 95-008, 11 F.C.C.R. 11,202 (1996).

[142] *Id.*

[143] Comments of CP&L, *et al.* at 66.

"accounting artifact," rather than a real recovery of costs.[144] As discussed above, utility support structures and rights-of-way have been assembled by loan of sovereign powers. They cannot be impressed into exclusive service for the profit of the utility at the expense of competition.

If it happens that the utility's depreciation reserves for conduit plant in fact exceed the conduit investment account, then the Commission can apply the same solution it finds appropriate for dealing with negative pole rate base. The answer is not to price conduit on a replacement-cost basis, because, as the utilities themselves admit, they are still actually using conduit dating from 1904.[145] Moreover, when spare capacity is needed today, it is secured through the installation of inner duct, not through the wholesale replacement of conduit networks which a replacement-cost methodology asks the regulator to assume will occur. Conduits for electric utilities, therefore should be priced no differently than they are for a telephone utility: on the average, system-wide net book cost.

Likewise the utilities claim that they do not have accurate records on their conduit plant. This too, we believe is a smoke screen. Utilities are required to report in their FERC Form 1 annual report the cost of their conduit systems.[146] Consequently, they ***must*** have the underlying records to support their cost claims in their sworn FERC submissions. While electric companies may not be required to report the linear footage of conduit that they have deployed in their grid, neither are they required to report the total number of poles in their network. But

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[144] *Id.*

[145] UE Comments at 7.

[146] The conduit systems' asset account is found at FERC Account 366.

pole counts which are needed for the calculation of pole rentals is readily ascertainable and routinely made available at rate-increase time.

Conduit/duct footage information is readily available as well, and is routinely produced in state conduit rate proceedings. Indeed, the extent of the detailed information that the electrics have available not only belies their claims that these records are poor and spotty, but reveals the extraordinary unused duct capacity that exists in the electrics' duct networks.

For example, Detroit Edison, which serves the Detroit, Michigan metropolitan area has in excess of ***5,000 miles*** of unused available duct capacity.[147] We submit that Detroit Edison is not unique and that these occupancy characteristics are likely mirrored throughout the Nation. The extent of available duct capacity in the electrics' networks, coupled with their competitive stance with the cable and CLEC industries, explains the utilities' efforts to obscure the true characteristics of their duct/conduit networks behind a veil of distortion and inaccuracy. In the truly rare instance when a utility has no records, surrogates may be used.[148] The utilities simply

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[147] Indeed, in one case where a regulatory agency recently considered the conduit rates to be charged by electric utilities (where the electric utilities were seeking agency approval for their proposed conduit rates and the utility was *volunteering* this information in support of an increased conduit rate), the utilities had no problem whatsoever in identifying extremely detailed information relative to their duct and conduit networks. Exhibit 6 attached to these Reply Comments shows that, in addition to stating—with great precision—the total liner miles of ducts in their network (9,246), the utility was able to identify—***to the tenth of a mile***—the amount of subtransmission facilities installed in those networks (1,777.9); the amount of distribution conductors (2,218.1); and the amount of duct leased to others (24.5). Out of a total duct capacity of 9,246 miles, only 4,020.5 miles (43%) of such capacity is occupied. The remaining 5,225.5 miles (or 27.6 million feet), representing fully 57% of its underground duct/conduit network, is available for occupancy. *See Consumers Power Co., et al.*, Mich. Pub. Serv. Case Nos. U-10741, U-10816, U-1083, Exhibit A-9 (originally attached to pre-filed direct testimony of Detroit Edison witness Karl E. Roehrig) (Feb. 11, 1997), *reh'g denied* (April 24, 1997) (Ex. 7 to these Reply Comments).

[148] *Capital Cities Cable, Inc. v. Mountain States Telephone and Telegraph Co.*, File Nos. PA-81-0026, PA- 81-0031, PA-81-0039, PA-82-0051, Mimeo 84786 at 4 (June 29, 1984); *Teleprompter Corp. v. Washington Water Power Co.*, 50 R.R.2d 54 (1981).

do not want to be required to produce this data because they do not want conduit rates to be regulated.[149]

As to the utilities' arguments that safety considerations should exonerate their conduit networks from rate regulation, such claims are without merit. If safety factors, or any other factor, prevent the use of electric duct capacity, then no consideration of rate methodologies is necessary because there is no access. The utility arguments, however, are not truly designed to contribute to the dialogue on rate methodologies, but to create the impression that underground electric facilities are so dangerous, that access occurs under only the very rarest of circumstances. The fact is that communications conductors can be routinely installed in electric-company owned conduit whenever it is in the economic interest of utilities to do so. This is why the utilities fought so strenuously in Docket 96-98 not to have their own telecommunications use of conduit treated as a trigger for opening them to nondiscriminatory third-party use. We do not doubt that significant safety precautions and worker qualifications are required when working around underground facilities. This is why cable operators and others are not permitted to access their facilities located in underground electric-owned conduit without first contacting the electric company about access. In fact, a frequent arrangement between cable operators and electric companies requires utility personnel to open the manhole, dispel potentially flammable gas accumulation, pump the manhole, and then be present to supervise the work being performed.[150]

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[149] Their motives for resisting conduit rate regulation are powerful indeed. Electric utilities as a matter of course have been making extortionate demands in exchange for permission to access underground conduit facilities. These demands include, among other, outright donation of massive fiber-optic plant, in addition to annual rentals and other costs that the utilities may seek to charge. *See, e.g., TCG Dallas v. Texas Utils. Elec. Co., Inc.*, No. 4:97CV51 (E.D. Tx. Feb. 26, 1997). The utilities resistance to an effective conduit regulatory scheme here is a naked bid to preserve the gravy train that they have until now been riding without fear of regulatory intervention or attaching party recourse.

[150] Under the *Local Competition Order*, however, other qualified personnel may now perform this work.

All this is done at the licensee's cost. In addition, under the usual conduit agreements, the licensee is required to provide the cable operator with a far-reaching indemnity for damages incurred in connection with the placement of licensee facilities in the conduit.

B. The Commission Should Reject ILEC Efforts To Inflate The Conduit Rate

While the ILECs as a group generally support the Commission's proposal for the half-duct convention, SBC has advocated something of a reversal to the Commission's proposal by claiming, in essence, that conduit owners should be permitted to artificially drive up rent through a new device: large amounts of reserved space.

1. ILEC Arguments Concerning "Municipal" and "Reserve" Duct Are Unsupported Conjecture

The statute defines usable to be every duct which can be used by any party. ILECs embrace a presumed municipal set-aside of one duct. Even without resort to empirical data of the actual characteristic of the conduit network, this duct is by definition "usable." It is part of the "total duct or conduit capacity" defined by Section 224 to be the denominator of the conduit use ratio.[151] Whatever party might make use of that capacity is irrelevant to its usability.

Not one ILEC has submitted a single piece of evidence sustaining any presumption of municipal set aside. The FCC is familiar with active resistance by ILECs to local franchising. In our experience, the occasional pole attachment agreement makes boilerplate reference to the right of some governments to use pole space, but no one has ever suggested that such space is unusable, and it is in fact used by commercial parties.

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[151] Likewise, the California statute modelled on Section 224, defines usable space in conduits as "all volume or capacity in which the public utility's line, plant, or system could legally be located, including the volume or capacity rendered unusable by the cable television corporation's equipment." Cal. Pub. Util. Code § 767.5 (Deering 1996).

Similarly, we occasionally have seen local right-of-way locations under which cities have the right to make some use of conduit. In actual practice, however, ducts are used by commercial parties without distinction or physical reservation. We submit that if there are any kinds of "reservations" of duct capacity, the ducts in question are no more unusable than commercial leased access channels are non-activated in the commercial leased access formula. For the purposes of regulating conduit occupancy, any claims of reserved duct capacity should be left to individual case proof, much like short poles are left to individual case proof. There is simple no record evidence to sustain any assumption that one duct in every conduit run is rendered unusable.[152]

The same holds true for utility arguments for reservation of maintenance duct.[153] Even without resort to empirical analysis, there is no reason to treat duct which may be used by a LEC as anything other than part of the "total duct or conduit capacity" defined by Section 224 to be the denominator of the conduit use ratio. In fact, to treat such duct as reserved would be utterly inconsistent with the *Local Competition Order*, in which the FCC made clear that Section 224 precludes ILECs from reserving space for their future needs.

On the empirical front, it cannot be presumed that there is a separate replacement duct reserved foot-for-foot to anticipate broken lines. No evidence has been advanced to support such a presumption. In the aerial world, in cases of emergency (such as in the case of massive

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[152] At most, as MCI has pointed out, the maximum required reservation is one *inner* duct, rather than one full duct. MCI Comments at 26. Assuming conservatively a four-chamber inner duct, this would result in removing one-fourth of one duct per conduit run, rather than one full duct.

[153] As set forth in the Declaration of Nicholas Theroux submitted with our initial Comments, we are unaware of any case in which the cable operators has been permitted to use so-called reserve or emergency duct for its own purposes. Theroux Decl. ¶ 6.

structural damage due to hurricanes), users of poles might J hook a new line, or may even crowd another user. No pole space is reserved. In the underground analogy, duct users might use old copper to pull in new innerduct containing fiber.[154] Even in instances where a LEC might maintain a "spare," we do not believe it has ever been made available for use by cable.[155] The fact is that if a cable operator were to suffer a failure to an underground line, the operator would not pull a new line through a spare duct. It would use the old line to pull new replacement line through into the same duct where the first line failed.[156] The "spare," that SBC and others advocate be removed from the denominator of the allocation factor exists solely for ILEC use, and should be deemed usable. There is certainly no empirical basis for industry wide presumption to the contrary.

2. The Half-Duct Convention Does Not Fully Recognize Real-World Underground Construction Practice And Should Be Expanded

We continue to believe that adopting a quarter-duct methodology most accurately reflects modern conduit network costs and construction practices. In our initial Comments we showed that there is innerduct available that allows for the subdivision of a single four-inch duct into as many as six conductor channels, making our quarter-duct proposal quite conservative.[157] Use of this convention is possible even in cases where inner duct is not yet installed because new innerduct can be pushed into or pulled through existing ducts. In cases where ducts are filled

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[154] Theroux Supp. Decl. ¶ 3.

[155] *See* Initial Comments of NCTA, *et al.* at 43-44; Theroux Decl. ¶¶ 4-5.

[156] Theroux Supp. Decl. ¶ 2.

[157] Ex. 15 to Initial Comments of NCTA, *et al.* We note, moreover, that MCI suggests a 3-duct presumption, Time Warner a 3.5-duct presumption, and TCI a 4-duct presumption.

with dead unused cables, those cables can be pulled out and in their place, multi-channel innerduct installed.

While the Commission's proposed half-duct convention is embraced by almost all ILECs, the presumption does not extend far enough to recognize the full extent of today's underground construction. Some commenters say that the half-duct approach is a fair average between those that will accommodate four-chamber inner duct and those that will not. But given the amount of additional capacity that can be created by innerduct technology, if we are to account for such averages on this record, it would have to be half-duct with no set aside, or quarter duct with ILECs' requested set aside, but not both. Our proposal already already be too generous to the duct owners.

Thus, we believe that the quarter-duct convention continues to be the most viable proposal for the allocation of space duct space and should be the presumptive allocator. As with presumptions in the pole formula, if the parties is able to come forward with specific system-wide evidence that this presumption for some reason is inaccurate, the party is free to make the showing.[158]

C. Conduit Carrying Charges

For the identical reasons set forth in Section III.B, above, the Commission should reject the utilities' arguments relative to the calculation of carrying charges. As we have shown, the cost of conduit plant must be calculated on a net book, rather than a gross, basis. A sample calculation is attached as Exhibit 8.

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[158] With respect to Sprint's comment that the half-duct method should not apply to its facilities, we submit that should the lessee want to lease a full duct, it should be required to pay for the full duct. If innerduct is pulled, the licensee should be responsible for only that portion of the duct that it actually is occupied. These factual showings can be made on a case-by-case basis should the utility wish to override the formula's allocation presumptions.

V. CONCLUSION

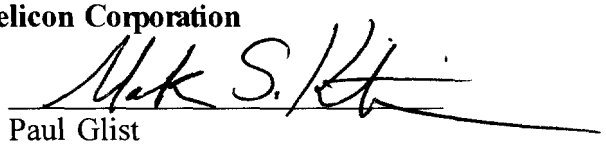
We respectfully urge the Commission to adopt any modifications to the pole attachment rules and pole attachment formula in a manner consistent with these Reply Comments and with our initial Comments submitted June 27, 1997.[159]

Respectfully submitted,

National Cable Television Association

Cable Telecommunications Association
Texas Cable & Telecommunications Association
Cable Television Association of Georgia
South Carolina Cable Television Association
Cable Television Association of Maryland, Delaware and the District of Columbia
Mississippi Cable Telecommunications Association
Mid-America Cable Telecommunications Association
Kansas Cable Telecommunications Association

Jones Intercable, Inc.
Charter Communications
Greater Media, Inc.
Prime Cable
Rifkin & Associates
TCA Cable TV, Inc.
The Helicon Corporation

By: 

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Their Attorneys

[159] Ex. 9 sets forth the modest modifications that we propose to the Commission's current pole attachment rules.

August 11, 1997

INDEX TO ATTACHMENTS OF
REPLY COMMENTS OF
NATIONAL CABLE TELEVISION ASSOCIATION, *ET AL.*
CS DOCKET NO. 97-98
AUGUST 11, 1997

EXHIBITS

1. *Bangor Hydro-Electric Co.*, Maine PSC Docket No. 97-168, Bangor Hydro-Electric Response to Oral Data Request 1b of the New England Cable Televisions Association.

2. Spreadsheet Demonstrating Accumulated Deferred Tax Computation.

3. Spreadsheet Demonstrating Impermissible Gross-Up Of Depreciation Rate Under Current Pole Attachment Formula.

4. Methodology for Calculation of Depreciation Carrying Charge on Net Plant Basis.

5. Discovery Response of Detroit Edison Company in Mich. Pub. Serv. Comm'n Case No. U-10831 To Request No. 32 of the Michigan Cable Telecommunications Association.

6. Discovery Response of Consumers Power Co. in Mich. Pub. Serv. Comm'n Case No. U-10831 To Request No. 32 of the Michigan Cable Telecommunications Association.

7. *Consumers Power Co., et al.*, Mich. Pub. Serv. Case Nos. U-10741, U-10816, U-1083, Exhibit A-9 (originally attached to pre-filed direct testimony of Detroit Edison witness Karl E. Roehrig).

8. Sample Conduit Rate Calculation: Quarter-Duct Convention.

9. Proposed Rule Modifications.

DECLARATION

Supplemental Declaration Of Nicholas Theroux

EXHIBIT 1

Bangor Hydro-Electric Company

Development of Labor Loader for 1997:

These Rates Would be Used to Burden Access Communications related labor charged to non-operating expense in 1997.	1997 Estimated Expense	% of 1997 Estimated Straighttime Labor
EMPLOYEE BENEFITS (1997 budgeted figures)		
FASB 106 EXPENSE-UNION	$665,000	3.84%
LTD-UNION	29,280	0.17%
SAFETY TRAINING	15,000	0.09%
VACATION EXPENSE (1996 ACTUAL COMPANYWIDE)	936,000	5.41%
SICK TIME -UNION	114,961	0.66%
HOLIDAY PAY-UNION	272,598	1.58%
FASB 106 EXPENSE-NONUNION	964,000	5.57%
MEDICAL	1,400,000	8.10%
MEDICAL ADMIN FEES	94,000	0.54%
PENSION	(22,669)	-0.13%
NONUNION-LTD	43,848	0.25%
401(k)	250,000	1.45%
SICK TIME -NONUNION	172,351	1.00%
HOLIDAY PAY-NONUNION	469,372	2.71%
SPECIFIC/AGGREG. INSUR.	98,250	0.57%
LIFE AD&D INSURANCE	120,900	0.70%
Total	$5,622,891	32.51%
FICA		
Estimated 1997 FICA Expense	1,452,000	8.40%
UNEMPLOYMENT		
Estimated 1997 Unemployment Tax Expense	120,000	0.69%
WORKERS' COMPENSATION		
Estimated 1997 Workers' Comp. Expense	166,000	0.96%
TOTALS	$7,360,891	42.56%
Divided by total budgeted straighttime labor $ for 1997	17,296,538	
Labor Overhead % per direct labor $	42.56%	
Add General Expense O/H % from Construction Overheads	15.74%	15.74%
Total Labor Overhead % per direct labor $ for 1997	**58.30%**	58.30%

The Company has developed these direct labor overhead percentages, and is awaiting the outcome of the current MPUC investigation which will provide guidance as to developing a methodology for full cost allocation.

The Company has currently not allocated overheads to Access Communication related costs charged to non-operating expense, but anticipates performing this allocation once the MPUC decision is reached on full cost allocation.

BANGOR HYDRO-ELECTRIC COMPANY
CONSTRUCTION OVERHEADS -Excluding Power Production Jobs
1997

Storeroom Expense	**19.01%**	**On all Materials and Supplies Issued from Inventory and Purchases of Transformers & Meters (note: excludes Caretaker inventory)**
Workers' Compensation Insurance	**2.70%**	**On all Straighttime Union Construction Payroll**
F.I.C.A	**7.65%**	**On all Construction Payroll**
Unemployment Taxes	**0.58%**	**On all Straighttime Construction Payroll**
Employee Benefits	**28.22%**	**On all Straighttime Construction Payroll**
Transportation Expenses- Including Depreciation Expense	**47.49%**	**On all Straighttime Union Construction Payroll**
General Expense	**15.74%**	**On all Straighttime Construction Payroll**

The following general expense percentages are applied to direct purchases and contract items based on total budgeted non-labor for a construction job (excluding materials & supplies inventories) Transformers and meters are also excluded.

$0-$50,000	**21.50%**
$50,001-$100,000	**17.50%**
$100,001-$400,000	**13.50%**
$400,001-$800,000	**9.50%**
GREATER THAN $800,000	**5.00%**

BANGOR HYDRO-ELECTRIC COMPANY
CONSTRUCTION OVERHEADS
FOR THE YEAR ENDED DECEMBER 31, 1997

STOREROOM EXPENSE

The determination of Storeroom Expense overheads is based on the following expense items:

Account 711.01 Storeroom Labor and Non-Labor and Estimated Insurance, Depreciation Expense and Property Taxes for the Stockrooms.

The relationship of these expenses to total Materials & Supplies issues (O&M and Capital, and meters and transformers) determines the Overhead percentage. In addition, the Labor component of Acct. 711.01 is burdened with FICA, Unemployment, Workers' Compensation Insurance, and Nonunion Welfare Benefits, which are discussed below.

The overhead percentage is applied to all Materials & Supplies issues to construction projects and purchases of meters and transformers under these two blankets. For inventory shipments directly to job sites, which are normally stockroom items, the construction project is not charged with Storeroom Expense, but will be charged with general expense.

Note: Caretaker inventory issues are excluded from receiving storeroom expense, given the inventory carrying costs are significantly different than normal stockroom inventory. Caretaker inventory is burdened with General Expense when issued to construction.

SUPERINTENDENTS

Eliminated in 1996.

WORKERS' COMPENSATION INSURANCE

The determination of Workers' Compensation Insurance overheads is derived as follows:

Total Workers' Compensation Insurance expense divided by Total Union Straighttime Payroll results in the Workers' Compensation Insurance overhead percentage.

The overhead percentage is applied to all direct straighttime union labor charged to construction projects.

FICA

The FICA overhead rate is equal to 7.65% (same as payroll withholding percentage). This rate is applied to all direct labor charged to construction projects.

BANGOR HYDRO-ELECTRIC COMPANY
CONSTRUCTION OVERHEADS
FOR THE YEAR ENDED DECEMBER 31, 1997

UNEMPLOYMENT TAXES

The determination of Unemployment Taxes overheads is derived as follows:

Total Unemployment Taxes expense divided by total Company Straighttime Payroll results in the Unemployment Taxes Overhead percentage.

The overhead percentage is applied to all straighttime direct labor charged to construction projects.

EMPLOYEE BENEFITS

The determination of Employee Benefits overheads is based on the following expense items:

Union Benefits:
- **FASB 106 (Retiree Health and Life Benefits)**
- **Long-term Disability**
- **Safety Training**
- **Sick, Holiday and Vacation Pay**

Nonunion Benefits:
- **FASB 106 (Retiree Health and Life Benefits)**
- **Long-term Disability**
- **Sick and Holiday Pay**

Mixed Benefits (cannot differentiate between Union and Nonunion):
- **Specific and Aggregate Insurance**
- **Life, and Accidental Death and Dismemberment Insurance**
- **Medical Plan expenses, net of employee contributions**
- **Administrative Fees for Medical Plan**
- **Pension**
- **401(k)-Company matching contributions**

The Union Benefits are divided by total union straighttime payroll, the Nonunion Benefits are divided by total straighttime nonunion payroll, and the Mixed Benefits are divided by total straighttime company payroll to arrive at the employee benefit overhead percentages. These overhead percentages are then multiplied by the estimated percentage of total straighttime construction labor for the category (example: union would be divided by 60% if 60% of total straighttime construction labor was union, nonunion employee benefits overhead percentages would be multiplied by 40%, and mixed employee benefits overhead percentages would remain at 100%) to arrive at the actual overhead percentages to be used. In addition, the Union Vacation is burdened with FICA, Unemployment, Workers' Compensation Insurance, and Union and Mixed Employee Benefits.

The overhead percentage is applied to all direct straighttime labor charged to construction projects.

EXHIBIT 2

CALCULATION OF MAXIMUM POLE ATTACHMENT RATE
Sample Telephone Company

	FCC Method	Telco Offer	FCC Method Zero ADT
Net Investment Per Bare Pole	$76.00	$94.91	$95.00
Gross Investment in Pole Plant	$100,000,000.00	$100,000,000.00	$100,000,000.00
-Depreciation Reserve for Poles	$50,000,000.00	$50,000,000.00	$50,000,000.00
-Accumulated Deferred Taxes	$10,000,000.00	$50,000.00	$0.00
=Net Investment in Pole Plant	$40,000,000.00	$49,950,000.00	$50,000,000.00
-Net Investment in Appurtenances (5%)	$2,000,000.00	$2,497,500.00	$2,500,000.00
=Net Investment in Bare Pole Plant	$38,000,000.00	$47,452,500.00	$47,500,000.00
/Number of Poles	500,000	500,000	500,000
=Net Investment per Bare Pole	$76.00	$94.91	$95.00
CARRYING CHARGES			
Maintenance			
Chargeable Maintenance Expenses	$1,000,000.00	$1,000,000.00	$1,000,000.00
/Net Investment in Pole Plant	$40,000,000.00	$49,950,000.00	$50,000,000.00
=Maintenance Carrying Charge	2.50%	2.00%	2.00%
Maintenance Expense for Bare Pole	$950,000.00	$950,000.00	$950,000.00
Depreciation			
Annual Depreciation Rate for Poles	5.00%	5.00%	5.00%
Gross Investment in Pole Plant	$100,000,000.00	$100,000,000.00	$100,000,000.00
/Net Investment in Pole Plant	$40,000,000.00	$49,950,000.00	$50,000,000.00
=Gross/Net Adjustment	250.00%	200.20%	200.00%
Deprec Rate Applied to Net Pole Plant	12.50%	10.01%	10.00%

Administrative			
Administrative Expenses	$400,000,000.00	$400,000,000.00	$400,000,000.00
Total Plant In Service	$10,000,000,000.00	$10,000,000,000.00	$10,000,000,000.00
-Depreciation Reserve for TPIS	$5,000,000,000.00	$5,000,000,000.00	$5,000,000,000.00
-Accumulated Deferred Taxes	$1,000,000,000.00	$1,000,000,000.00	$0.00
=Net Plant in Service	$4,000,000,000.00	$4,000,000,000.00	$5,000,000,000.00
Administrative Carrying Charge	10.00%	10.00%	8.00%
Taxes			
Normalized Tax Expense	$250,000,000.00	$250,000,000.00	$250,000,000.00
Total Plant In Service	$10,000,000,000.00	$10,000,000,000.00	$10,000,000,000.00
-Depreciation Reserve for TPIS	$5,000,000,000.00	$5,000,000,000.00	$5,000,000,000.00
-Accumulated Deferred Taxes	$1,000,000,000.00	$1,000,000,000.00	$0.00
=Net Plant in Service	$4,000,000,000.00	$4,000,000,000.00	$5,000,000,000.00
Tax Carrying Charge	6.25%	6.25%	5.00%
Return			
Return Authorized	11.25%	11.25%	11.25%
Total Carrying Charges	42.50%	39.51%	36.25%
Allocation of Annual Carrying Costs			
Space Occupied by Cable	1.0	1.0	1.0
/Total Useable Space	13.50	13.50	13.50
Charge Factor	7.41%	7.41%	7.41%
Maximum Rate			
Net Investment Per Bare Pole	$76.00	$94.91	$95.00
*Carrying Charges	42.50%	39.51%	36.25%

Carrying Cost	$ 32.30	$ 37.50	$ 34.44
*Charge Factor	7.41%	7.41%	7.41%
=MAXIMUM RATE	**$2.39**	**$2.78**	**$2.55**

Zeroing Out ADT produces lower rate than Telco Accounting for ADT

DATA ENTRY AND SOURCE (ARMIS)			
Gross Investment in Pole Plant	$100,000,000.00	$100,000,000.00	$100,000,000.00
Gross Investment in Total Plant	$10,000,000,000.00	$10,000,000,000.00	$10,000,000,000.00
Depreciation Reserve for Pole Plant	$50,000,000.00	$50,000,000.00	$50,000,000.00
Depreciation Reserve for TPIS	$5,000,000,000.00	$5,000,000,000.00	$5,000,000,000.00
Pole Maintenance Expense	$1,000,000.00	$1,000,000.00	$1,000,000.00
Depreciation Rate for Poles	5.00%	5.00%	5.00%
Administrative Expense	$400,000,000.00	$400,000,000.00	$400,000,000.00
Taxes	$250,000,000.00	$250,000,000.00	$250,000,000.00
Accumulated Deferred Taxes	$1,000,000,000.00	$1,000,000,000.00	$0.00
Accumulated Deferred Taxes (Internal Record Proffer)		$50,000.00	
Accumulated Deferred Taxes (Prorated to Poles)	$10,000,000.00		$0.00
Overall Rate of Return (Last Rate Case)	11.25%	11.25%	11.25%
Number of Poles	500,000	500,000	500,000

EXHIBIT 3

CALCULATION OF MAXIMUM POLE ATTACHMENT RATE
Sample Telephone Company

	FCC Method	Adjusting for Depreciation Prescription on Net FCC Method
Net Investment Per Bare Pole	$76.00	$76.00
Gross Investment in Pole Plant	$100,000,000.00	$100,000,000.00
-Depreciation Reserve for Poles	$50,000,000.00	$50,000,000.00
-Accumulated Deferred Taxes	$10,000,000.00	$10,000,000.00
=Net Investment in Pole Plant	$40,000,000.00	$40,000,000.00
-Net Investment in Appurtenances (5%)	$2,000,000.00	$2,000,000.00
=Net Investment in Bare Pole Plant	$38,000,000.00	$38,000,000.00
/Number of Poles	500,000	500,000
=Net Investment per Bare Pole	$76.00	$76.00
CARRYING CHARGES		
Maintenance		
Chargeable Maintenance Expenses	$1,000,000.00	$1,000,000.00
/Net Investment in Pole Plant	$40,000,000.00	$40,000,000.00
=Maintenance Carrying Charge	2.50%	2.50%
Maintenance Expense for Bare Pole	$950,000.00	$950,000.00
Depreciation		
Annual Depreciation Rate for Poles	5.00%	5.00%
Gross Investment in Pole Plant	$100,000,000.00	
/Net Investment in Pole Plant	$40,000,000.00	
=Gross/Net Adjustment	250.00%	
Deprec Rate Applied to Net Pole Plant	12.50%	5.00%

If 5% Depreciation rate is Prescribed for Application to Net Rate Base, grossing it up creates significant overcompensation

Administrative		
Administrative Expenses	$400,000,000.00	$400,000,000.00
Total Plant In Service	$10,000,000,000.00	$10,000,000,000.00
-Depreciation Reserve for TPIS	$5,000,000,000.00	$5,000,000,000.00
-Accumulated Deferred Taxes	$1,000,000,000.00	$1,000,000,000.00
=Net Plant in Service	$4,000,000,000.00	$4,000,000,000.00
Administrative Carrying Charge	10.00%	10.00%
Taxes		
Normalized Tax Expense	$250,000,000.00	$250,000,000.00
Total Plant In Service	$10,000,000,000.00	$10,000,000,000.00
-Depreciation Reserve for TPIS	$5,000,000,000.00	$5,000,000,000.00
-Accumulated Deferred Taxes	$1,000,000,000.00	$1,000,000,000.00